

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2013-XXXX

AMENDING ORDER R5-2007-0113 (NPDES PERMIT NO. CA0079243)
WASTE DISCHARGE REQUIREMENTS AND MASTER RECLAMATION PERMIT

CITY OF LODI
WHITE SLOUGH WATER POLLUTION CONTROL FACILITY
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) finds that:

1. On 14 September 2007, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2007-0113, prescribing waste discharge requirements for the White Slough Water Pollution Control Facility, San Joaquin County. For the purposes of this Order, the City of Lodi is hereafter referred to as "Discharger" and the White Slough Water Pollution Control Facility is hereafter referred to as "Facility."
2. The Discharger owns and operates two separate wastewater collection systems, a municipal wastewater line and an industrial wastewater line that collects primarily food processing wastewater from Pacific Coast Producers, a local cannery. The Facility's wastewater treatment system consists of a head works with comminutors, mechanical grit removal, primary sedimentation, conventional activated sludge with nitrification and denitrification, secondary sedimentation, tertiary treatment using cloth media filtration, and ultraviolet light pathogen deactivation (UV Disinfection).
3. Order R5-2007-0113 (NPDES No. CA0079243), allows year-round discharges of tertiary treated, UV disinfected municipal wastewater to Dredger Cut, a water of the United States and part of the Sacramento-San Joaquin Delta. However in general, the Facility only discharges to surface water during the months of September through June. Typically during the summer months (mid-~~June~~ April through early-September), undisinfected secondary treated municipal wastewater is pumped to the Facility's 40-acres of unlined storage ponds and is used to irrigate the Discharger's agricultural fields. The Discharger's agricultural fields cover approximately 790 acres adjacent to the Facility and are used for fodder, fiber, or feed crops that are not directly used for human consumption (hereinafter The Agricultural Fields). Throughout the year, the Discharger also supplies tertiary treated municipal wastewater (Recycled Water) to Northern California Power Agency (NCPA) and San Joaquin County (SJCo) Vector Control District. Approximately 1.0 – 1.5 million gallons per day of Recycled Water is used as cooling water makeup for NCPA. The SJCo Vector Control District uses approximately 45 million gallons per year of Recycled Water for its mosquito fish rearing ponds.
4. On 7 July 2009, the State Water Resources Control Board (State Water Board) adopted Water Quality Order 2009-0005 (Lodi Order), which was subsequently amended on 7 February 2012 by WQ 2012-0001, remanding Order R5-2007-0113 to the Central Valley Water Board, in part for reconsideration and revision of the exemption of land disposal activities of section 20090 of the Title 27 of the California Code of Regulations (Title 27).
5. In February 2012, the Discharger submitted a Report of Waste Discharge (ROWD) to renew Order R5-2007-0113 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079243, which regulated discharges to Dredger Cut, discharges to land, and water reclamation.

6. In the February 2012 ROWD, the Discharger requested separate permits to be issued by the Central Valley Water Board for the surface water and land discharges. Due to the complexities of the discharges to land for this Facility, separate permits for the surface water and land discharges is practical.
7. On X October 2013, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2013-XXXX (NPDES Permit No. CA0079243), which allows year-round discharges of tertiary treated, UV disinfected municipal wastewater to Dredger Cut.
8. In order to continue the regulation of the land discharges and water reclamation, this Order amends Order R5-2007-0113 to remove all NPDES requirements for the surface water discharge and makes some necessary updates to the land discharge requirements. These updates include: (1) addition of monitoring requirements for the industrial influent for total nitrogen, ammonia, nitrate plus nitrite and standard minerals; (2) updates to the Title 27 findings and addition of a compliance schedule in accordance with State Water Board WQ 2012-0001; (3) modifies the daily biochemical oxygen demand (BOD) loading rate to the Agricultural Fields; and (4) updates to the antidegradation findings and addition of a requirement to submit Best Practicable Treatment or Control (BPTC) study for the land discharges. These changes are discussed in more detail in the Findings 9 – 12, below. The land discharge waste discharge requirements will be fully evaluated and new waste discharge requirements will be issued in the future by the Central Valley Water Board.
9. **Additional Monitoring Requirements.** Groundwater monitoring results show that the discharge of waste is threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality for nitrate and manganese. This amendment of Order R5-2007-0113 includes additional monitoring for the industrial influent for total nitrogen, ammonia, nitrate plus nitrite, and standard minerals (which includes total manganese). This monitoring will assist in understanding the sources of excess nitrogen and manganese in the groundwater.
10. **Title 27.** Discharges of domestic sewage or treated effluent to land, including but not limited to evaporation ponds or percolation ponds, are exempt from the requirements of Title 27, CCR, based on section 20090(a). The Facility contains storage facilities and agricultural reuse fields. These facilities from where discharges to land may occur include the Effluent Storage Ponds, the Agricultural Fields and sludge lagoons. The State Water Board's Lodi Order found that the unconditional sewage exemption (Section 20090(a)) applies to post-treatment facilities that (1) are used to store treated municipal wastewater prior to ultimate disposal or reuse, (2) do not receive any other wastes other than authorized on-site storm water flows, and (3) are under the control of the municipal treatment plant. Based on the Lodi Order and the Discharger's groundwater monitoring results, this Order amends the Title 27 findings contained in Order R5-2007-0113 for the discharges to land as follows:
 - **Effluent Storage Ponds.** The Effluent Storage Ponds hold undisinfected secondary treated effluent, untreated industrial flows, storm water, and agricultural return water and thus are not unconditionally exempt pursuant to Title 27, section 20090(a) because they store untreated industrial flows. The conditional exemption pursuant to Title 27, section 20090(b) (i.e., wastewater exemption) is the Title 27 exemption that may be applied to the Effluent Storage Ponds. The wastewater exemption has the following preconditions for exemption from Title 27:

20090(b) Wastewater – Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

(1) the applicable [regional water quality control board] has issued WDRs, or waived such issuance;

(2) the discharge is in compliance with the applicable water quality control plan; and

(3) the wastewater does not need to be managed . . . as a hazardous waste . . .

The Effluent Storage Ponds meet preconditions (1) and (3). However, since the Effluent Storage Ponds are unlined, wastewater contained in the ponds percolates to the underlying groundwater. Therefore, additional evaluation is needed to determine if precondition (2) has been met. The Discharger provided a January 2011 groundwater study that concludes groundwater monitoring results obtained downstream of the Effluent Storage Ponds indicate that all constituents comply with the applicable water quality control plan and therefore, the exemption pursuant to Title 27, section 20090(b) applies because the quality of the wastewater discharged to the ponds ensures that waste releases comply with Basin Plan groundwater objectives. Central Valley Water Board staff has not completed its evaluation of the evidence provided by the Discharger. Consequently, the Central Valley Water Board has not made any conclusion on the exemptions to Title 27 for the Effluent Storage Ponds in this Order. Central Valley Water Board staff will evaluate the evidence provided by the Discharger and update this Order to include specific findings regarding compliance with Title 27 for the Effluent Storage Ponds. ~~The Effluent Storage Ponds are not exempt from the requirements of Title 27 CCR, pursuant to Title 27 CCR section 20090(a) and (b). The Effluent Storage Ponds hold undisinfected secondary treated effluent, untreated industrial flows, storm water, and agricultural return water, and thus are not unconditionally exempt pursuant to Title 27, section 20090(a) because they store untreated industrial flows. The conditional exemption pursuant to Title 27, section 20090(b) also does not apply because the Effluent Storage Ponds are unlined; therefore, wastewater contained in the ponds percolates to the underlying groundwater and monitoring data obtained from the ponds indicate that some constituents do not comply with the applicable water quality control plan.~~

- **Wastewater Applied to the Agricultural Fields/Reuse.** During the agricultural season (about April through September), the Discharger irrigates the Agricultural Fields with the untreated food processing wastewater blended with secondary treated municipal effluent. The conditional exemption pursuant to Title 27, section 20090(b) (i.e., wastewater exemption) is the Title 27 exemption that may be applied to the discharge of wastewater to the Agricultural Fields. The discharge of wastewater to the Agricultural Fields meet preconditions (1) and (3). However, the Discharger's groundwater study shows exceedances of manganese and nitrate that may be attributed by the discharge of wastewater to the Agricultural Fields. Therefore, the discharge of wastewater to the Agricultural Fields is threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality and precondition (2) may not be met. The Discharger has made a number of recent improvements with respect to discharge of wastewater to the Agricultural Fields, and additional monitoring and evaluation is needed to determine if the preconditions for the wastewater exemption under Title 27 are satisfied. Central Valley Water Board staff has not completed its evaluation of the evidence provided by the Discharger. Consequently, the

Central Valley Water Board has not made any conclusion on the exemptions to Title 27 for the discharge of wastewater to the Agricultural Fields. Central Valley Water Board staff will evaluate the evidence provided by the Discharger and update this Order to include specific findings regarding compliance with Title 27 for the discharge of wastewater to the Agricultural Fields. ~~The Agricultural Fields/Reuse.~~ During the agricultural season (typically April through September), the Discharger irrigates agricultural fields with untreated food processing wastewater blended with undisinfected secondary treated municipal effluent. Additionally, the Discharger applies dewatered biosolids on the Agricultural Fields. Groundwater characterization shows exceedences of manganese and nitrate that may be attributed by the Discharger. Therefore, the reuse of treated wastewater, untreated industrial wastewater, storm water, and agricultural runoff and biosolids on the agricultural fields **are not** exempt from Title 27 pursuant to Section 20090(h).

- **Dewatered Biosolids Discharge to the Agricultural Fields.** ~~The Discharger land applies dewatered Class B biosolids to selected agricultural fields between cropping cycles as a soil amendment. The use and disposal of biosolids comply with existing Federal and State laws and regulations, including permitting requirements and technical standards in Code of Federal Regulations (CFR) Part 503. Previous disposal practices included mixing biosolids subnatant with irrigation water as well as applying liquid slurry of biosolids directly to the Agricultural Fields. The Facility improvements completed in 2012, include an additional lined sludge lagoon, fan press dewatering and lined covered sludge storage area. All subnatant and supernatant are discharged to the headworks for treatment and no longer applied to the Agricultural Fields. Additionally, the biosolids are no longer applied to the Agricultural Fields. Only dewatered biosolids are applied to the Agricultural Fields. The land application of biosolids on the Agricultural Fields is exempt from Title 27 pursuant to Section 20090(f).~~
- **Sludge Lagoons.** ~~The Discharger land applies dewatered Class B biosolids to selected agricultural fields. The use and disposal of biosolids comply with existing Federal and State laws and regulations, including permitting requirements and technical standards in Code of Federal Regulation (CFR) Part 503. Previous disposal practices included discharging Dissolved Air Flotation subnatant and Sludge Lagoon supernatant to the Effluent Storage Ponds, as well as, adding a liquid slurry of biosolids with treated wastewater and applying directly to the agricultural fields. The Facility improvements completed in 2009 include an additional lined sludge lagoon, rotary dewatering, and lined covered sludge storage area. All subnatant and supernatant are now pumped to the headworks of the Facility for treatment and no longer discharged to the Effluent Storage Ponds. Additionally, the biosolids slurry is no longer applied to the agricultural fields. Only dewatered stabilized biosolids are applied to the agricultural fields. Because the sludge lagoons are lined, The Discharger operates two concrete-lined sludge lagoons as part of the solids handling operations. Liquid digested biosolids are held in the lagoons prior to dewatering. Supernatant from the lagoons is discharged to the headworks of the treatment plant. The concrete-lined sludge lagoons are a necessary part of the Facility's wastewater treatment system and are exempt from Title 27 pursuant to Section 20090(a).~~

~~Since the discharges to the Effluent Storage Ponds and Agricultural Fields do not comply with Title 27, the amendment of Order R5-2007-0113 includes a compliance schedule for the Discharger to meet the regulatory requirements of Title 27 no later than 3 October 2018.~~

11. **Biochemical Oxygen Demand (BOD) Loading.** The Discharger submitted the draft "White Slough WPCF Organic Loading Study Technical Report" dated March 2009, which evaluated the increased loading of BOD to the agricultural fields. Control and Test Fields were loaded with varying BOD loads of five pounds per acre-day to 250 pounds per acre-day. The results showed that up to 250 pounds of BOD per acre-day could be applied without any impacts to the groundwater or any nuisance odors. Therefore, the Land Discharge Specifications of Order R5-2007-0113 is amended to allow an increase in the daily BOD loading rate to the agricultural fields from 100 pounds per acre-day to 200 pounds per acre-day.
12. **Antidegradation.** The groundwater monitoring results show that the discharge of waste is threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality for nitrate and manganese. In order to comply with State Water Board Resolution No. 68-16, the Discharger must implement BPTC. This Order amends Order R5-2007-0113 by adding a compliance schedule for compliance with Resolution 68-16 and with the groundwater limitations. The compliance schedule includes a requirement for the Discharger to finalize a best practical treatment or control (BPTC) evaluation and implement its recommendations no later than 1 May 2016~~2020~~.
13. ~~Issuance of modifications to the Waste Discharge Requirements Order are exempt from the California Environmental Quality Control Act (Public Resources Code section 21000, et seq.) in accordance with California Water Code section 13389. The action to amend waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality (CEQA), in accordance with the California Code of Regulations, title 14, section 15301.~~
14. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend Waste Discharge Requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

IT IS HEREBY ORDERED THAT:

As shown in Attachment 1 and discussed in the above findings, Waste Discharge Requirements Order R5-2007-0113 is amended to (1) remove all NPDES permit requirements; (2) add new monitoring requirements for the industrial influent ~~for total nitrogen, ammonia, nitrate plus nitrite, and standard minerals, for dewatered biosolids, and for supplemental irrigation water~~; (3) update the Title 27 findings ~~and add compliance schedule~~ in accordance with amended State Water Board WQ 2009-0005; (4) modify the daily BOD loading rate to the Agricultural Fields; and (5) update antidegradation findings and add a compliance schedule to meet groundwater limitations and a requirement to submit a Best Practicable Treatment or Control study for the land discharges. Some editorial and clarifying changes were also made to the Order.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resource Control Board (State Water Board) to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m. on the next business day.

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Copies of the law and regulations applicable to filing petitions may be found on the Internet at:
http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on X October 2013.

PAMELA C. CREEDON, Executive Officer